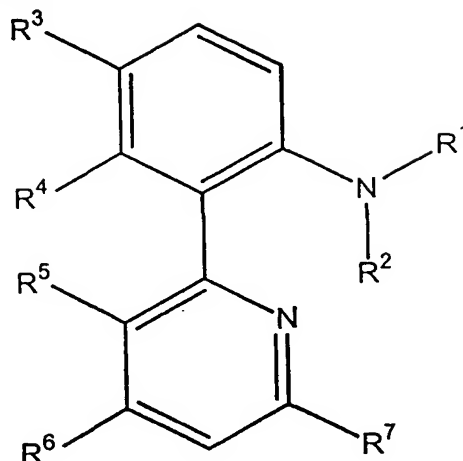


Amendments to the Claims:

Claim 1 (Original) A compound of the formula



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>6</sup> and R<sup>7</sup> each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl, and SiR<sub>a</sub>R<sub>b</sub>R<sub>c</sub>;

alternatively, R<sup>1</sup> and R<sup>2</sup>, when taken together, form a =CR<sub>a</sub>R<sub>b</sub> group;

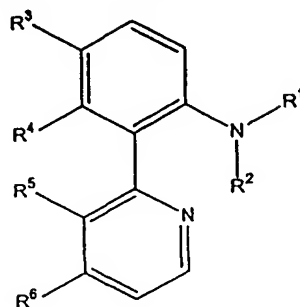
or, when taken together with the nitrogen atom to which they are attached, R<sup>1</sup> and R<sup>2</sup> form a heterocyclic ring structure, which may be unsubstituted or substituted;

R<sup>4</sup> and R<sup>5</sup> each represents halogen or a substituted or unsubstituted radical selected independently from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl, and SiR<sub>a</sub>R<sub>b</sub>R<sub>c</sub>;

alternatively, R<sup>3</sup> and R<sup>4</sup>, when taken together with the carbon atoms to which they are attached, or R<sup>5</sup> and R<sup>6</sup>, when taken together with the carbon atoms to which they are attached, form a ring structure;

R<sub>a</sub>, R<sub>b</sub>, and R<sub>c</sub> each represents hydrogen or a substituted or unsubstituted radical independently selected from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl; and said ring structure including R<sup>3</sup> and R<sup>4</sup> or R<sup>5</sup> and R<sup>6</sup> is selected from the group consisting of cycloalkyl, aryl, or heterocyclic, any of which may be substituted or unsubstituted.

Claim 2 (Original) - A process for the synthesis of a compound of formula



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^5$  and  $R^6$  each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl, and  $\text{SiR}_a\text{R}_b\text{R}_c$ ;

alternatively,  $R^1$  and  $R^2$ , when taken together, form a  $=\text{CR}_a\text{R}_b$  group;

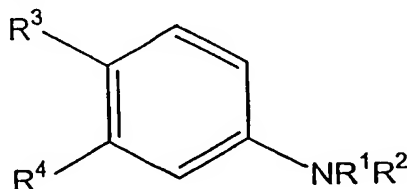
or, when taken together with the nitrogen atom to which they are attached,  $R^1$  and  $R^2$  form a heterocyclic ring structure, which may be unsubstituted or substituted;

$R^4$  and  $R^5$  each represents halogen or a substituted or unsubstituted radical selected independently from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl, and  $\text{SiR}_a\text{R}_b\text{R}_c$ ;

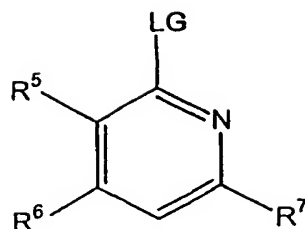
alternatively,  $R^3$  and  $R^4$ , when taken together with the carbon atoms to which they are attached, or  $R^5$  and  $R^6$ , when taken together with the carbon atoms to which they are attached, form a ring structure;

$R_a$ ,  $R_b$ , and  $R_c$  each represents hydrogen or a substituted or unsubstituted radical independently selected from alkyl, aryl, acyl, aralkyl, heterocyclo, cycloalkyl; and said ring structure including  $R^3$  and  $R^4$  or  $R^5$  and  $R^6$  is selected from the group consisting of cycloalkyl, aryl, or heterocyclic, any of which may be substituted or unsubstituted;

comprising reacting a compound of formula



with a compound of formula

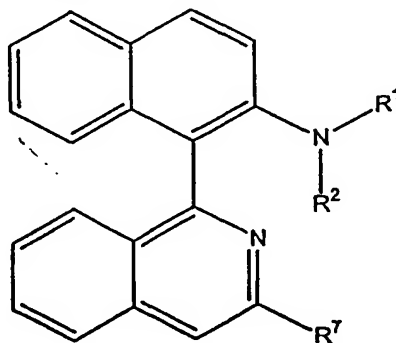


wherein LG represents a leaving group,  
in the presence of an aluminum compound.

Claim 3 (Original) The process of claim 2 wherein one of R<sup>1</sup> and R<sup>2</sup> represents hydrogen.

Claim 4 (Original) The process of claim 2 wherein the aluminum compound is a dialkyl aluminum chloride or trimethyl aluminum.

Claim 5 (Original) A compound of the formula



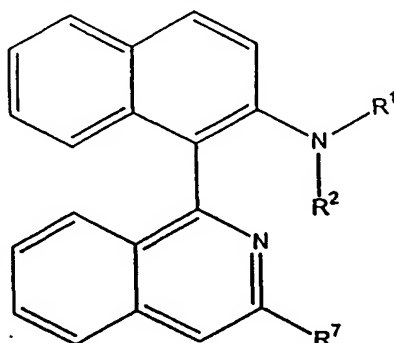
wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>7</sup> each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from the group consisting of alkyl, cycloalkyl, aryl, aralkyl, heterocyclo, acyl, and SiR<sub>a</sub>R<sub>b</sub>R<sub>c</sub>;

alternatively, R<sup>1</sup> and R<sup>2</sup>, when taken together, form a =CR<sub>a</sub>R<sub>b</sub> group;

or, when taken together with the nitrogen atom to which they are attached, R<sup>1</sup> and R<sup>2</sup> form a heterocyclic ring structure, which may be unsubstituted or substituted ; and

$R_a$ ,  $R_b$ , and  $R_c$  each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from the group consisting of alkyl, cycloalkyl, aryl, aralkyl, heterocyclo, and acyl.

Claim 6 (Original) A process for the synthesis of a compound of formula



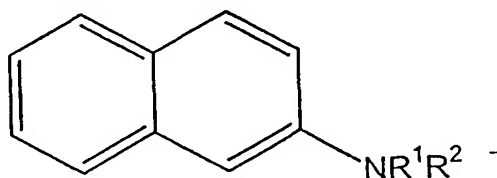
wherein  $R^1$ ,  $R^2$ , and  $R^7$  each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from the group consisting of alkyl, cycloalkyl, aryl, aralkyl, heterocyclo, acyl, and  $\text{SiR}_a\text{R}_b\text{R}_c$ ;

alternatively,  $R^1$  and  $R^2$ , when taken together, form a  $=\text{CR}_a\text{R}_b$  group;

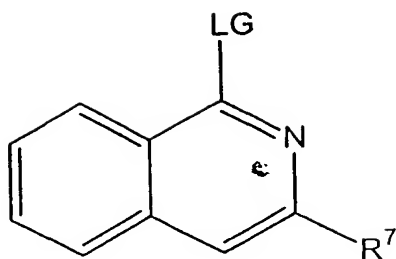
or, when taken together with the nitrogen atom to which they are attached,  $R^1$  and  $R^2$  form a heterocyclic ring structure, which may be unsubstituted or substituted; and

$R_a$ ,  $R_b$ , and  $R_c$  each represents hydrogen, halogen, or a substituted or unsubstituted radical independently selected from the group consisting of alkyl, cycloalkyl, aryl, aralkyl, heterocyclo, and acyl;

comprising reacting a compound of formula



with a compound of formula



wherein LG is a leaving group,  
in the presence of an aluminum compound.

- Claim 7 (Original)      The process of claim 6 wherein one of R<sup>1</sup> and R<sup>2</sup> represents hydrogen.
- Claim 8 (Original)      The process of claim 6 wherein the aluminum compound is a dialkyl aluminum chloride or trimethyl aluminum.
- Claim 9 (Currently amended)      A complex of a compound of ~~claim 1~~ or claim 5 with a metal atom or with a proton.
- Claim 10 (Original)      The complex of claim 9, wherein the metal atom is a group IV metal.
- Claim 11 (Original)      A process for olefin polymerization, wherein an olefin polymerization catalyst or mediator is derived from a pre-catalyst comprising a complex of claim 9.
- Claim 12 (Original)      A process for preparing a polyolefin by polymerizing an olefin in the presence of a polymerization catalyst, said catalyst comprising a complex of claim 9.
- Claim 13 (Original)      The process of claim 11 or 12, wherein the complex is selected from the group consisting of (Me-IAN)<sub>2</sub>ZrCl<sub>2</sub>, (Me-IAN)<sub>2</sub>ZrMe<sub>2</sub>, (Ph-IAN)<sub>2</sub>ZrMe<sub>2</sub>, and (Bn-IAN)<sub>2</sub>ZrMe<sub>2</sub>.
- Claim 14 (Original)      The complex of claim 9, wherein the metal is zirconium, zinc, or iron.

Claim 15 (Original) A process for olefin polymerization, wherein an olefin polymerization catalyst or mediator is derived from a pre-catalyst comprising a complex of claim 14.

Claim 16 (Original) A process for preparing a polyolefin by polymerizing an olefin in the presence of a polymerization catalyst, said catalyst comprising a complex of claim 14.